



# Severn Estuary Shoreline Management Plan Review

Appendix A: SMP Development



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# Severn Estuary Shoreline Management Plan Review (SMP2)

## Appendix A: Development of the Severn Estuary SMP2

December 2010

### Notice

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Annex A : Severn Estuary SMP2 Scoping Report (Sept 2008)

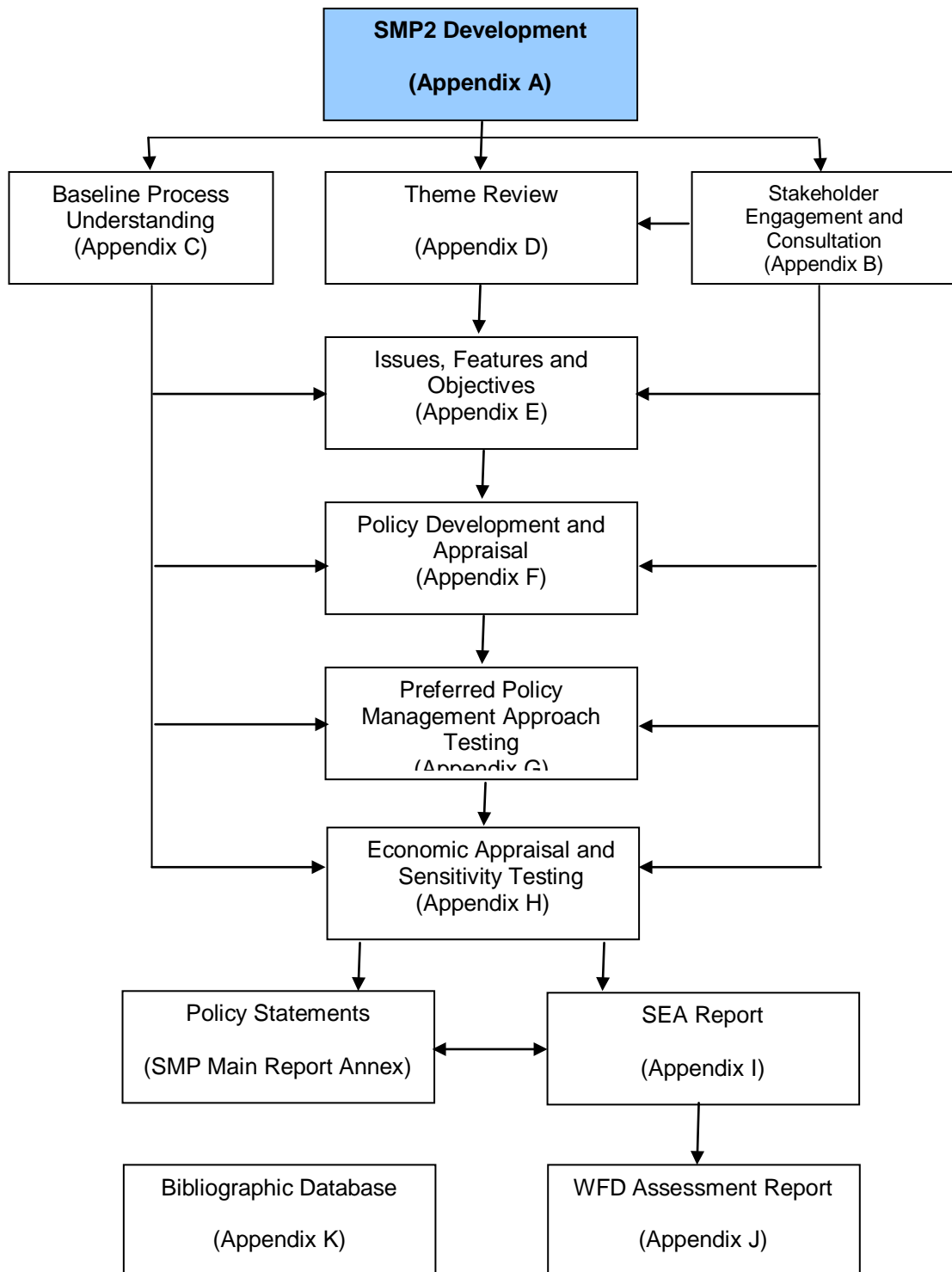
Annex B : WAG Supplementary SMP Guidance for Wales (Oct 2008)

# Supporting Appendices

Information required to support the Severn Estuary Shoreline Management Plan Review (SMP2) is provided in the following appendices. These supporting documents offer transparency to the decision making process that is undertaken, leading to explanations and reasoning for the promoted policies.

<b>A: SMP2 Development</b>	<b>The history, structure and development of the SMP are detailed in this report. The investigation and decision making process are explained more fully to outline the procedure to setting policy.</b>
<b>B: Stakeholder Engagement and Consultation</b>	<b>Stakeholder communication is continuous through the SMP2 process, comments on the progress of the management plan are recorded here.</b>
<b>C: Baseline Process Understanding</b>	<b>This report includes detail of coastal dynamics, defence data and shoreline scenario assessments of NAI (No Active Intervention – defences are not maintained, repaired or replaced allowing the shoreline to evolve more naturally) and With Present Management (WPM) i.e.: SMP1 Policy.</b>
<b>D: Theme Review</b>	<b>The identification and evaluation of the natural landscape and conservation, the historic environment and present and future land use of the shoreline.</b>
<b>E: Issues, Features and Objectives</b>	<b>The features of the shoreline are listed within this report. A series of strategic objectives are then set along with commentary on the relative importance of each feature identified.</b>
<b>F: Policy Development and Appraisal</b>	<b>Presents the consideration of generic policy options for each frontage identifying possible acceptable policies and their combination into 'Management Approaches' for testing. Also presents the appraisal of impacts upon shoreline evolution and the appraisal of objective achievement.</b>
<b>G: Preferred Policy Management Approach Testing</b>	<b>Presents the policy assessment of appraisal of objective achievement towards definition of the Preferred Plan (as presented in the Shoreline Management Plan document).</b>
<b>H: Economic Appraisal and Sensitivity Testing</b>	<b>Presents the economic analysis undertaken in support of the Preferred Plan.</b>
<b>I: Strategic Environmental Assessment Report</b>	<b>Presents the various items undertaken in developing the Plan that specifically relate to the requirements of the EU Council Directive 2001/42/EC (the Strategic Environmental Assessment Directive), such that all of this information is readily accessible in one document. This includes information to support towards a Habitat Regulatory Assessment (HRA).</b>
<b>J: Water Framework Assessment Report</b>	<b>Provides a retrospective assessment of the policies defined under the Severn Estuary SMP2 highlighting future issues for consideration at policy implementation stage.</b>
<b>K: Bibliographic Database</b>	<b>All supporting information used to develop the SMP is references for future examination and retrieval.</b>

The information presented in each appendix is supported and guided by other appendices; the broad relationships between the appendices are illustrated overleaf.



# Acronyms and Abbreviations

Term	Definition
AA	Appropriate Assessment.
ABP	Association of British Ports
AONB	Area of Outstanding Natural Beauty.
ASERA	Association of Severn Estuary Relevant Authorities
ATL	Advance the Line
BAP	Biodiversity Action Plans
BCCPA	Bristol Channel Counter Pollution Association
BMIF	British Marine Federation
CAPE	Community Adaptation Planning and Engagement
CCW	Countryside Council for Wales
CD	Chart Datum.
CFMP	Catchment Flood Management Plan
CHaMP	Coastal Habitat Management Plan
CPSE	Coast Protection Survey England
CSG	Client Steering Group, principal decision-making body for the Shoreline Management Plan = Severn Estuary Coastal Group (SECG)
CV	Capital Value. The actual value of costs or benefits.
DCLG	Department of Communities and Local Government
DECC	Department of Energy and Climate Change
Defra	Department for Food, Environment and Rural Affairs.
EA	Environment Agency, may also be referred to as 'The Agency'
EH	English Heritage
EiP	Examination in Public
EMF	Elected Members Forum (SMP2), comprising an Elected Member from each of the Local Authorities
FCA	Flood Consequence Assessment
FCDPAG3	Flood and Coastal Defences Project Appraisal Guidance
FCS	Favourable Conservation Status
SEFRMS	Severn Estuary Flood Risk Management Strategy

Term	Definition
GCR	Geological Conservation Review site
GES	Good Ecological Status
GHT	Gloucester Harbour Trustees
GIS	Geographic Information System
HAT	Highest Astronomical Tide
HER	Historic Environment Record
HLT	High Level Target
HMWB	Heavily Modified Water Bodies
HRA	Habitats Regulations Assessment
HTL	Hold the Line
ICZM	Integrated Coastal Zone Management
IFCA	Integrated Flood Consequence Assessment
IROPI	Imperative Reasons of Over-riding Public Interest
JAC	Joint Advisory Committee (of the Severn Estuary Partnership)
KSG	Key Stakeholder Group, which acts as a focal point for discussion and consultation through development of the SMP
KWS	Key Wildlife Sites
LAT	Lowest Astronomical Tide
LDP	Local Development Plan
LPA	Local Planning Authority
MAFF	Ministry of Agriculture Fisheries and Food (now DEFRA)
MCZ	Marine Conservation Zone
MHWN	Mean High Water Neap tide
MHWS	Mean High Water Spring tide
MLWN	Mean Low Water Neap tide
MLWS	Mean Low Water Spring tide
MMO	Marine Management Organisation
MoD	Ministry of Defence
MR	Managed Realignment
MSL	Mean Sea Level



Term	Definition
MU	Management Unit
NAI	No Active Intervention
NE	Natural England
NEDS	National Economic Development Strategy
NFDCC	National Flood and Coastal Defence Database
NMR	National Monuments Record
NNR	National Nature Reserve
NT	National Trust
ODPM	Office of the Deputy Prime Minister
PCPA	Planning and Compulsory Purchase Act
PMG	Project Management Group
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
PSA	Public Service Agreement
PU	Policy Unit
PWW	Planning Policy Wales
QRG	Quality Review Group
RBMP	River Basin Management Plan
RCZAS	Rapid Coastal Zone Assessment Survey
RDP	Rural Development Plan
RIGS	Regionally Important Geological Sites
RSS	Regional Spatial Strategy
RYA	Royal Yachting Association
SAC	Special Area of Conservation
SAM	Scheduled Monument
SDAP	Sustainable Development Action Plan
SDS	Sustainable Development Schemes
SEA	Strategic Environmental Assessment
SECG	Severn Estuary Coastal Group = Client Steering Group (CSG)

Term	Definition
SEP	Severn Estuary Partnership
SESMP2	Severn Estuary Shoreline Management Plan Review
SFC	Sea Fisheries Committee
SFRA	Strategic flood risk assessment
SMP	Shoreline Management Plan
SMP1	A first-round Shoreline Management Plan
SMP2	A second-round Shoreline Management Plan
SMR	Sites and Monuments Record
SoP	Standard of Protection
SPA	Special Protection Area
SRS	Single Regional Strategy
SSSI	Site of Special Scientific Interest
SuDs	Sustainable Urban Drainage System
TAN	Technical Advice Note
UKCiP	United Kingdom Climate Impacts Programme
UKCP	UK Climate Projections
WAG	Welsh Assembly Government
WFD	Water Framework Directive
WPM	With Present Management
WSP	Wales Spatial Plan

# 1. Introduction

## 1.1 The Shoreline Management Plan

The Shoreline Management Plan (SMP) is a non-statutory, policy document for coastal defence management planning. It takes account of other existing planning initiatives and legislative requirements, and is intended to inform wider strategic planning. It is therefore a high level evaluation of the shoreline that includes:

- Large-scale assessments of the coastline – how the coast will change over time with erosion, sea level rise and climate change (in 20, 50 and 100 years);
- Identification of the risks to the developed, historic and natural environment as the coast changes;
- Policy frameworks to address the risks in a sustainable manner – an indication of how the coastline should look under the promoted policies in 20, 50 and 100 years.

Ultimately, the SMP advises on how the coastline should change in the long term and enables planners, developers, businesses and residents to plan for those changes by managing the coast. This could be undertaken by maintaining or improving defences, by enabling the natural processes to play a greater role, creating new natural habitat or by helping areas that are at risk of flooding at some point in the future to cope with and limit the impact of flooding events.

The information contained in the SMP will form the basis for a Planning Authority to offer advice on future development or advice to the public (and others) on where to avoid building in areas that are likely to be affected by coastal erosion or regular flooding. An SMP does not set policy for anything other than coastal defence management, such as land drainage. It does, however, take into account plans and policies to manage flooding from rivers (e.g. Catchment Flood Risk Management Plans) to ensure that they do not contradict each other.

A new approach is now taken to developing SMPs (now referred to as the Second Generation Review of SMPs – or SMP2) which looks further into the future and covers a 100 year period, subdivided into ‘epochs’ at 2005, 2025, 2055 and 2105. The SMP2 considers coastal strategies and studies undertaken since the previous SMP, and changes in policies and legislation (e.g. the Water Framework Directive, Habitats Directive).

Government and lead authorities have a responsibility to ensure that investment of taxpayers' money is justified by the benefits delivered. SMPs attempt to use best science to achieve sustainable policies. For example, natural coastal processes might make it inadvisable to build defences at certain locations because of adverse knock-on effects elsewhere. At other locations, the likely cost of defences compared to the assets protected may make investment in defences uneconomic and again the SMP should reflect this. SMPs provide a long-term vision for a sustainable coast where future decisions can be taken with confidence using the best available evidence and effective engagement with local communities.

To this end, due to current legislative and funding arrangements, climate change and other environmental considerations, it may not be possible to defend, or continue to defend all land or property from flooding or erosion.

It is therefore vital that all those with an interest in this length of coast become aware that the SMP review process is underway, understand the implications, and are able to communicate to the Coastal Group any information they feel needs to be considered.

## 1.2 Severn Estuary Flood Risk Management Strategy (SEFRMS)

An important parallel and more detailed study taking place is the Flood Risk Management Strategy (SEFRMS). This was begun in February 2008, prior to the start of the SMP2 in October 2008. The early design of the tasks within the SEFRMS were carried out with the possibility in mind that the SMP2 would be running in parallel, as summarised in Figure 1.1

The purpose of the SEFRMS is to take forward agreed SMP2 policy decisions for lengths of coast and develop these into actual coastal defence options that shall help towards implementing the agreed policy. This will focus in more detail on actual defence position, the most appropriate standard of protection and more localised engineering challenges associated with individual lengths of coast.

The SEFRMS will identify where defences will be aligned, the type of defence and the level of defence they will provide. The SEFRMS will also investigate how important habitat in the Estuary that will be lost due to erosion, sea level rise and climate change can be replaced or protected. Protecting and creating new habitats can help to manage the risk of coastal erosion and flooding by providing natural defences.

**It is therefore important to distinguish between these two projects here.**

1. The SMP2 ONLY proposes policy over the agreed timescales.
2. The SEFRMS then develops these policies into the most environmentally and economically sustainable coastal defence options possible.

# Severn Estuary Flood Risk Management Strategy - Route Map

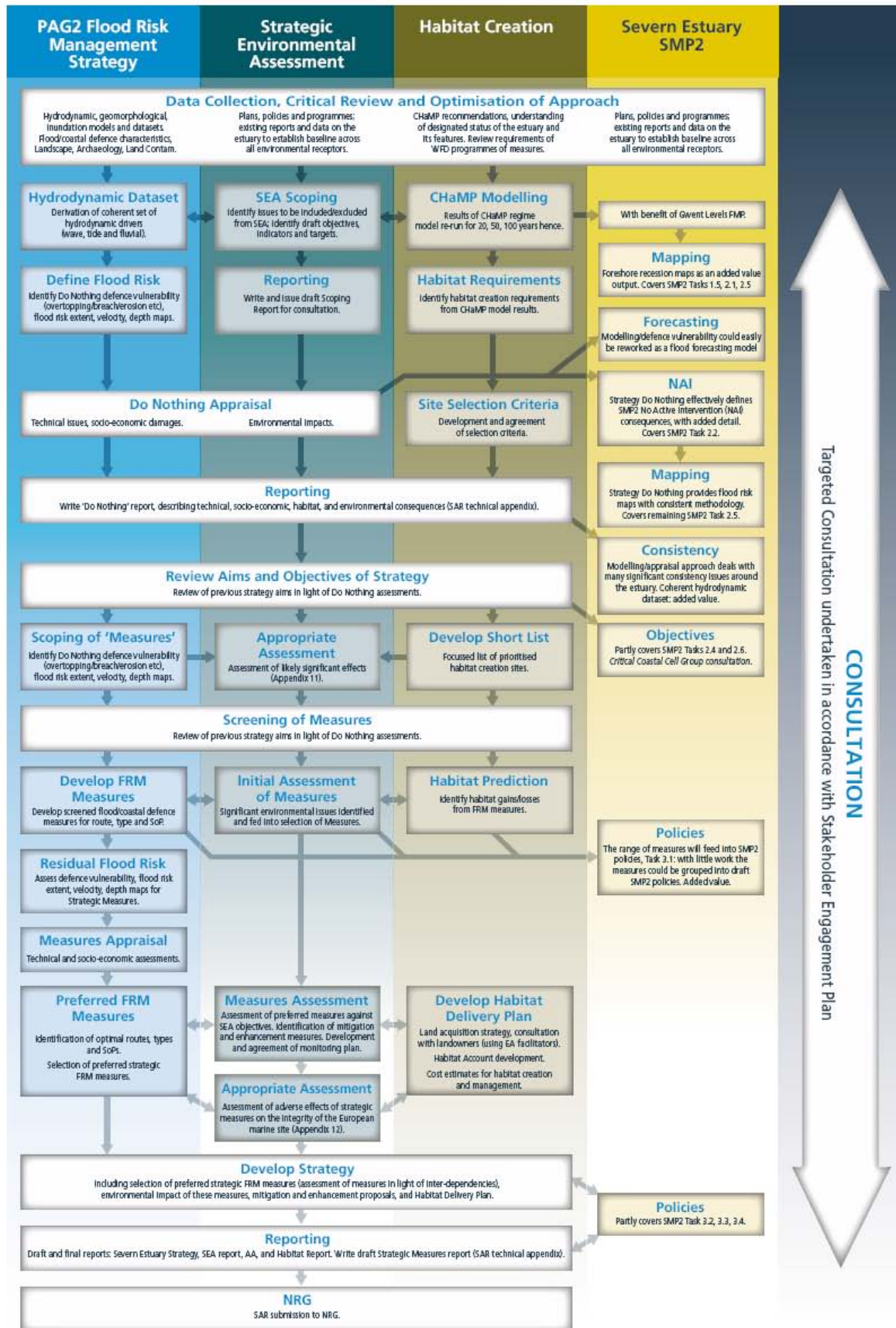


Figure 1.1 - Early development of linkages between SEFRMS and SMP2.

## 1.3 National Progress on Shoreline Management Planning

### 1.3.1 Overview

In 1998, a team of consultants from Gifford and Partners Ltd were appointed to prepare the original Shoreline Management Plan for the Severn Estuary. Based upon the guidance at that time, policies were defined for a 50-year period. This was completed in 2000, and numerous studies and schemes have subsequently been developed based on the policies recommended.

At a national level, since the SMP1 plans were completed, Coastal Groups (see below) have made significant progress in understanding and mapping coastal processes through the first generation of Shoreline Management Plans (SMPs) which cover the 6,000 kilometres of coast in England and Wales.

The first generation SMPs were both innovative and a big step forward towards better understanding of our coast and the need for strategic planning. Many operating authorities have adopted the recommendations of their SMP as a basis for production of individual strategic plans, monitoring programmes and studies for all or part of their coastline and, where proven by strategic plans, for investment in appropriate capital improvement projects.

They are now being reviewed to ensure full account is taken of latest information and future challenges. A renewed effort is needed to identify sustainable and deliverable solutions to manage risk, working with natural processes wherever possible.

### 1.3.2 Coastal Groups

Coastal Groups, made up primarily of coastal district authorities and other bodies with coastal defence responsibilities, have provided a key forum for discussion and co-operation and play an important part in the development of SMPs for their areas. Recently, Coastal Groups have become fewer, to form bigger and more strategic groups. They now have consistent terms of reference and membership and have a strong Environment Agency input. This change came about in June 2007, when the former Minister for Environment and Climate Change, Ian Pearson, announced the new arrangements for the Environment Agency's overview role on the future management of coastal erosion and sea flooding in England. The Minister's announcement included a statement on the proposed arrangements for the coastal strategic overview. The statement included the intention that Coastal Groups should become more strategic and play a stronger role in the future planning of flood and coastal erosion risk management. The new coastal groups would commence from 1 April 2008 and be effective by October 2008. Details on the Severn Estuary Coastal Group (SECG) are presented in Annex A plus information on the following website:

<http://www.severnestuary.net/secg/>

### 1.3.3 Futurecoast

A national Defra funded project, referred to as Futurecoast<sup>1</sup> developed a new way of looking at coastal change, known as a 'behavioural systems approach', which looks at **how** and **why** the coast changes over time.

This approach was used by Defra to develop new guidance on how SMP2s should be developed<sup>2</sup>. This guidance has also been adopted by WAG to apply to SMP2s in Wales,

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<sup>1</sup> Defra, (2002), Futurecoast produced by Halcrow on behalf of Defra.

with some additional guidance to take account of particular Welsh issues. As this SMP2 covers an area that is partly in England and partly in Wales, it needs to take account of both English and Welsh priorities.

#### 1.3.4 SMP2 Procedural Guidance

Building on the findings of the Futurecoast project, the SMP2 guidance documents were produced to outline the procedures for producing shoreline management plans (SMPs). Following a review of the strengths and weaknesses of the first generation SMPs and full consultation with the industry, an updated guidance for the second generation SMPs was published in 2001.

To offer a sustainable "vision" for the coast Defra's SMP2 guidance recommends that options should be appraised over a 100-year horizon, rather than 50 years. SMPs will incorporate latest research such as the Foresight project and the Futurecoast project promoted by Defra which has provided nationally consistent predictions of long-term coastal evolution specifically to help inform these SMP reviews.

This latest updated guidance aims to help coastal groups review first generation SMPs to produce SMP2s. The guidance aims to ensure that the SMP reviews take advantage of the best aspects of the first generation of SMPs and are developed consistently with other policy objectives. SMPs produced following the guidance will outline the strategic direction for each coastal unit, following an in-depth and robust assessment of economic, environmental and social factors.

The Severn Estuary SMP2 has adhered to this Guidance, though where additional clarification was needed for this SMP2, this has been discussed and accepted by the Coastal Group and this is presented in the SMP2 Main Report Part A. Although published by Defra these documents are also appropriate for use in Wales and for this SMP2, the approach is supported by WAG.

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<sup>2</sup> Defra, (2006) Shoreline Management Plan Guidance, Vol.1 and Vol 2., <http://www.defra.gov.uk/environ/fcd/guidance/smp.htm>

## 2. Project Specific Information

### 2.1 The SMP2 Study Area

The SECG have defined the area covered by the SMP2. It follows the shoreline from Lavernock Point, near Penarth in Wales to Anchor Head, just north of Weston Bay in England. The upstream boundary of the SMP2 is at Haw Bridge, near Gloucester. Haw Bridge is just below the current tidal limit and still influenced by the sea. It is likely that the influence of the tide and the tidal limit will change over the 100-year time period that the SMP2 covers. Haw Bridge was, therefore, considered an appropriate upper limit to the SMP2.

The estuary limits of the SMP2 area were determined by the SECG. The second generation SMPs will include estuaries up to their tidal limit. This is a change from the SMP1 which only went up to the coastal protection limit. Table 2.1 lists the rivers and estuaries that will be included in the SMP review and their tidal limits.

List of Inlets /Rivers	Part of Larger Estuarine System	Stated Tidal Limit	Grid Ref.
River Wye	n/a	Bigsweir Bridge	353869E 205104N
River Usk	n/a	Newbridge on Usk	338563E 194729N
River Rhymney	n/a	Weir	320874E 179879N
River Taff (via the Cardiff Bay Barrage)	Cardiff Bay	Cardiff Bay Barrage	319130E 172660N
River Ely (via the Cardiff Bay Barrage)	Cardiff Bay	Cardiff Bay Barrage	319130E 172660N
Ebbw River	n/a	Refuse Tip	330452E 185695N
Goldcliff Pill	n/a	Fisher's Gout	336709E 183024N
River Banwell	n/a	New Bow Sluice	335309E 166018N
River Yeo	n/a	Tutshill Ear	338152E 165835N
Blind Yeo	n/a	Blind Yeo Pumping Station	339221E 170223N
River Avon	n/a	Netham Weir	361609E

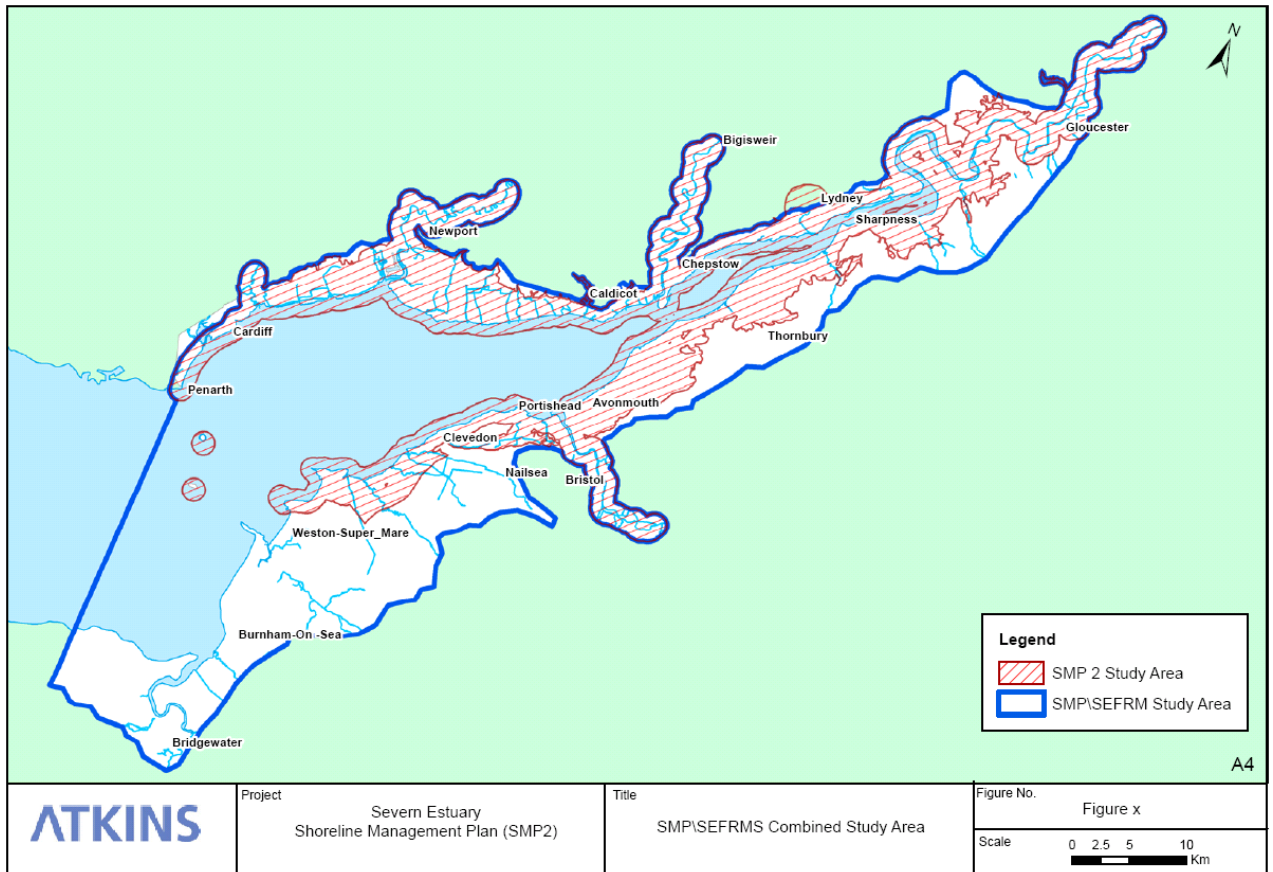


			<b>172600N</b>
<b>Oldbury Pill</b>	<b>n/a</b>	<b>Oldbury Pill Sluice</b>	<b>360274E</b> <b>190673N</b>
<b>Berkeley Pill</b>	<b>n/a</b>	<b>Berkeley Pill Sluice</b>	<b>366665E</b> <b>199892N</b>
<b>West Channel</b>	<b>River Severn</b>	<b>Maisemore Bridge</b>	<b>381696E</b> <b>221222N</b>
<b>East Channel</b>	<b>River Severn</b>	<b>Llanthony Weir</b>	<b>382199E</b> <b>218217N</b>

**Table 2.1 - Stated Tidal Limits of Rivers and Estuaries to be included in the SMP review**

From the shoreline, the area of the SMP2 extends inland one kilometre or to the extent of a 1 in 1,000 year flooding event (whichever is greatest) and upstream into rivers that flow into the Estuary. This ensures that all areas likely to be affected by changes to the shoreline or flooding from the sea are included within the area of the SMP2. The SMP2 also includes the islands of Flat Holm and Steep Holm.

Section 1 has highlighted the parallel study known as SEFRMS. The study areas of the two projects are very similar, although the SMP2 boundaries extend further upstream of the River Severn and its tributaries, and the SEFRMS boundary extends further downstream to include part of Bridgwater Bay (see Figure 2.1).



**Figure 2.1 - Project boundary differences**

The Severn Estuary SMP2 process defined customised objectives to specifically meet the needs of the stakeholder and to suit the unique environment. In addition to considering these objectives, Defra outlined a suite of high level objectives for the UK shoreline which all SMP2s are to be assessed against:

- Shoreline management policies should take due consideration of current Government sustainable development policies, and High Level Targets, regulations, statutes, and climate change guidelines associated with flood and coastal defence;
- Shoreline management policies should seek to have no adverse effect on any physical processes that benefits rely upon;
- Shoreline management policies should take due consideration of the need to maintain, restore and where possible enhance the total stock of natural and historic assets; and
- Shoreline management policies should have regard to current regional development agency objectives and statutory planning policies.

## 2.2 The Project Management Group (PMG)

Ten local authorities and two national administrations share the Severn Estuary shoreline within the SMP2 area.

Local authorities and the Environment Agency are responsible for the defence of the coast. Local authorities generally manage defences that protect the coast from erosion, while the Environment Agency manages the risk from flooding. Together, they are required to produce an SMP that sets out policies for the sustainable management of the coast.

The local authorities and the Environment Agency have set up a Project Management Group (PMG), including representatives from key bodies, to oversee the development of the SMP2.

Project Management Group members:

<b>Name</b>	<b>Representing</b>
<b>Susan Russell</b>	<b>Environment Agency</b>
<b>Natalie Newton</b>	<b>Environment Agency</b>
<b>Ken Tatem</b>	<b>Environment Agency</b>
<b>Nicola Rimington</b>	<b>Countryside Council for Wales (CCW)</b>
<b>Sue Howard</b>	<b>Countryside Council for Wales (CCW)</b>
<b>Dean Jackson-Johns</b>	<b>The Caldicot and Wentlooge Levels Internal Drainage Board (IDB)</b>
<b>Paul Parker</b>	<b>Severn Estuary Partnership (SEP)</b>
<b>Adrian Jowitt</b>	<b>Natural England (NE)</b>
<b>Chris Barrow</b>	<b>Bristol City Council</b>
<b>David Harris</b>	<b>Monmouthshire County Council</b>
<b>Steve Edwards</b>	<b>Vale of Glamorgan Council</b>
<b>Peter Jones / Kerry Kierle</b>	<b>Welsh Assembly Government (WAG)</b>
<b>Sue Hughes</b>	<b>Glamorgan-Gwent Archaeological Trust (GGAT)</b>

It should be noted that some PMG members have changed over the course of the SMP2 development. All the organisations listed above have been represented throughout the process.

## 2.3 Consultants

The Project Management Group has commissioned Atkins Ltd to prepare the SMP2.

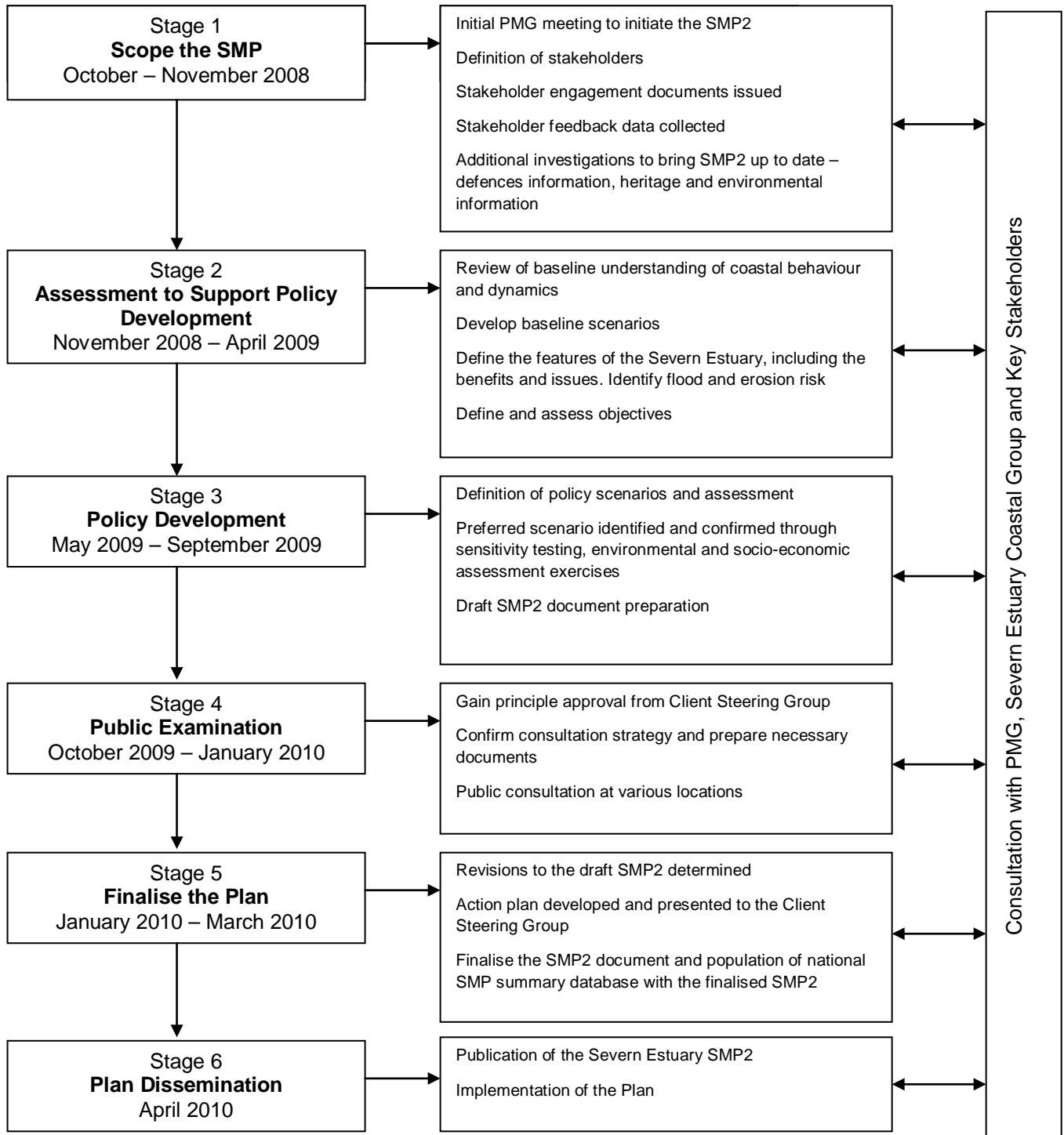
Key team members include:

<b>Name</b>	<b>Role</b>
<b>Richard Samphier</b>	<b>Project Director</b>
<b>Jonathan McCue</b>	<b>Project Manager</b>
<b>Kath Winnard</b>	<b>Deputy Project Manager</b>
<b>Karen Hills</b>	<b>SEA Manager</b>

### 3. SMP2 Programme

Figure 3.1 outlines the approach adopted for the production of the Severn Estuary SMP2 which outlines six stages of work between inception and completion. The Severn Estuary SMP2 followed a tight time schedule and was able to streamline certain tasks whilst working alongside the SFRMS Project. Details of each stage are presented in the following Sections.

**Figure 3.1 – SMP2 Approach**



### 3.1 SMP2 Scoping Report

An adapted version of this report is included in Annex A of this Appendix. Its aim was to provide a record of activities undertaken by the Severn Estuary Coastal Authorities Group (the Coastal Group) and to collate information relevant to the various sub tasks. This report has no specific external function in the SMP process.

The review covers the coast from Anchor Head (Weston-super-Mare) in Somerset to Lavernock Point in South East Wales. It clearly identifies the study area, the inland limits of the estuaries and the available information for the study.

### 3.2 Stakeholder Engagement Strategy (Appendix B)

The Stakeholder Engagement Strategy addresses the need to inform and involve stakeholders throughout all stages of the SMP2 process. Full stakeholder and public engagement on issues and features within the SMP2 area, was undertaken to help produce the most effective management plan that meets the needs of the area, taking account of the opinions and views of all interested parties.

The first Severn Estuary SMP identified a large number of stakeholders that were collated into a database of names, organisations, positions and contact details. This list of stakeholders has been revisited and reviewed by the PMG for the SMP2.

The Stakeholder Engagement Strategy is included within Appendix B. In summary, the stakeholder group comprised representatives from groups with local, regional and national interest in addition to site specific interests. Such a group was selected to try to achieve a 'holistic' consultation approach, taking consideration of all interests in the coast:

Stakeholder representatives included:

- County Councils;
- Town Councils;
- Parish/Ward Councils;
- Commercial interests e.g. British Energy;
- Conservation bodies e.g. National Trust, RSPB;
- Recreational groups;
- Historic environment advisory e.g. English Heritage, Cadw, GGAT;

Stakeholders were invited to the first round of consultation which was held in January 2009, to obtain the features that key stakeholders regarded as valuable assets to the Severn Estuary. The second stakeholder consultation meeting was held June 2009 to ensure that the SECG and PMG had captured the key features from the first consultation period. Questionnaire responses and comments made during consultation were collated and recorded within a database. Consultation responses can be found within Appendix B.

### 3.3 Data Collection

Data was collected via a number of sources including stakeholders, existing literature and web related searches. Key sources included:

- Severn Estuary SMP1 Final Report (2000);
- The Severn Estuary Partnership website - <http://www.severnestuary.net/sep/>;
- The Severn Estuary Coastal Group website - <http://www.severnestuary.net/secg/>;
- Studies undertaken/collated for the SEFRMS (Atkins, 2009);

- Local authorities;
- OS data;
- Coastal Protection Survey;
- Strategy Studies;
- National Flood and Coastal Defence Database;
- MAGIC website;
- Natural England;
- English Heritage;
- Cadw/GGAT archaeological information;
- CCW reports and information;
- Additional local conservation information (including National Trust on Westbury Park Gardens);
- Futurecoast (shoreline features and dynamics);
- Studies/reports;
- Site visits;
- LGA Local Plans;
- Stakeholder questionnaires and supporting information.

All of the data used in developing the SMP is referenced and recorded in the bibliographic database in Appendix K.

## 4. Stage 2: Assessments to Support Policy Development

### 4.1 Baseline Understanding of Coastal Behaviour and Dynamics (Appendix C)

Coastal behaviour and dynamics of the Severn Estuary were assessed (by ABP Mer Ltd) through use of existing information available providing detail at various temporal and spatial scales. This review includes statements on interactions, shoreline movement and predictions of shoreline evolution at various scales. A baseline understanding of coastal behaviour and dynamics provides the necessary data to guide policy appraisal.

As well as considering natural features along the coast, there also needs to be consideration of existing defences (produced by Atkins Ltd). This report is divided into 2 separate parts:

- Part A – Baseline Understanding of Coastal Behaviour and Dynamics - A desktop baseline review of coastal processes was produced using existing data (refer Appendix C). The baseline review includes statements on sediment sources and sinks, transport, and hydrodynamic interactions, shoreline movement and predictions of estuarine evolution. It underpins coastal process understanding of the study area and is the basis for the development of the baseline scenarios.
- Part B – Coastal Defences Report - Coastal defence data was collated from the National Flood and Coastal Defence Database and updated where data from more recent SFRMS studies and inspections were available (refer Appendix K).

Development of baseline scenarios provides an indication of how the shoreline is behaving and the influence that coastal management has upon this behaviour. This is the basis on which flood and coastal risks are determined. This analysis and subsequent mapping has been used to develop and appraise policy scenarios. Baseline scenarios of No Active Intervention (NAI) and With Present Management (WPM; SMP1 Policy, 2000) have been developed for the three 'epochs' - 2025, 2055 and 2105.

The 'No Active Intervention' assessment assumes that defences identified are not maintained; the effectiveness of the defences will change across each time period as some fail sooner than others, depending on their residual life. In order to make an assessment of residual life of defences, the type of defence, condition and material will be noted by the assessment.

The 'With Present Management' assessment of the shoreline will consider the policies in place that guide the current practices (as set by the SMP1).

The assessment will identify lengths of coast where, due to altering coastal processes (e.g. rising relative sea levels), current levels of maintenance on defences may become ineffective at managing the risk of flooding and/or erosion and where more significant management regimes would be needed to maintain their integrity and effectiveness.

The study frontage was divided into a number of Theme areas based on coastal processes and shoreline position was estimated for the three epochs of 20, 50 and 100 years (taking sea level rise into account) under the NAI management approach. Summary statements were produced for both 'No Active Intervention' and 'With Present Management' outlining the estimated erosion rates and the residual life of the defences that the estimated shoreline position was based upon. The mapped shoreline positions show the estimated maximum extent of change and are a combination of evidence from monitoring or

comparison of historical maps together with geomorphological interpretation. The mapping of predicted shoreline change for the 'No Active Intervention' scenario, was used as a baseline against which features at risk from coastal flooding and erosion, were identified. This approach highlighted what features were potentially at risk in 0-20 years, 20-50 years and 50-100 years. Mapping for the With Present Management scenario was undertaken at a strategic level only due to the challenges associated with flood cell inter-connectivity. This is further described in Appendix C.

## 4.2 The Theme Review and Issues, Features and Objectives (Appendix D)

Issues, Features and Objectives are identified initially from the SMP1 and supported with any new information from Local Authorities and Heritage and Environmental Interest Groups. Consultation with stakeholders was undertaken in order to identify other unclassified features of the Severn Estuary shoreline. Where required, specific workshop events were held with key stakeholders (historic environment stakeholders in April 2009 and natural environment stakeholders in May 2009) to achieve this.

From the features, benefits and issues findings, along with findings from literature searches, a 'Theme Review' is generated, which outlines areas of the coastline in terms of their importance for the:

- Natural environment, conservation interests and landscape character;
- Historic environment;
- Present and future land use.

Following recognition of the features and issues within the SMP2 study area the identification of flood and erosion risk becomes feasible. The identification of flood and erosion risk is later used to influence policy proposals.

## 4.3 Issues, Features and Objectives (Appendix E)

### 4.3.1 Defining Objectives

From the Theme Review and the stakeholder consultation, the Issues Table was developed (refer Appendix E). This outlined the following elements:

1. Location;
2. Feature;
3. Issues associated with feature;
4. Is it a flood and coastal defence issue?;
5. Does this issue affect policy?

Defining objectives helps in the development of the SMP2 by helping to:

- inform the development of policy options;
- provide a focus for shaping consensus amongst stakeholders on the often conflicting issues that will be raised during the SMP2 formulation.

The Issues, Features and Objectives report and the Theme Review (Appendix D) provide a general outline for drafting objectives for each of the features. These were refined following discussion with the PMG to determine objectives for each feature, based on the issues that affect it and the benefits the community derives from the feature.

The importance of definition of objectives is grounded in the thought that if stakeholders can reach an agreement on what the objectives for each feature should be, this can be



used as the basis for reaching consensus on the overall SMP2. Objectives once defined were taken to consultation events and made available online to gain approval from the stakeholders.

The next stage of the work was to use the features, issues and benefits identified to define objectives within the context of the characterisation of the Severn Estuary coast. The objectives were aimed to state simply and succinctly what we aimed to achieve with regard to delivering shoreline management policies.

A separate workshop was held with key stakeholders associated with the historic environment and planning officers from Local Authorities. This was undertaken to determine the objectives to ensure that the SMP objectives were consistent with other planning documents and aspirations for the coast (see Appendix B).

Objectives are used in two ways within the development of the SMP; first to guide the selection of policy options (the reasons for management), the second at the end of the process to assess the degree to which any SMP policy scenario delivers the aim of the SMP.

#### 4.3.2 Assessment of Objectives

To gain further appreciation of the priority level of the objectives generated, six fundamental questions were addressed:

- What are the Benefits? / Why is the issue important?
- Scale of importance? Local, regional, national or international.
- Who are the beneficiaries?
- What could affect the features value /sustainability? What threats are there?
- Is there enough of this benefit? The scarcity of the benefit at the scale at which it is important.
- Is there potential for substitution of the benefit?

The answers to these questions were determined from the Theme Review and were taken back to the Stakeholders in the 2nd round of consultation for review, discussion and confirmation. Events were held at 3 separate key stakeholder locations in Clevedon and Penarth (during June 2009) and in Gloucester in August 2009 (see Appendix B for details).

While it is clearly possible to prioritise objectives in certain ways within themes (e.g.: such as in the effective hierarchy defined by international, national or local environmentally designated site), due to the nature of the estuary and its distinct nature, such a crude reflection of priority was not fully helpful. Such an approach, it was felt would not give due weight to the often quite local issues on the coast. Such weighting was also found to be difficult in assessing objectives across themes. *“i.e. one town can be compared to another town, but the importance of a town can not be directly compared to that of a designated conservation site.”*

In many ways such a strict approach could engender conflict rather than attempt to resolve issues to mutual benefit, particularly in a cross border SMP2 such as this one for the Severn. This was discussed with the Project Group and it was agreed that there was a close interaction between themes. To address this the development of policy needed to be taken from a very holistic attitude; one that could only really be achieved through considering an area's values and aims in a complete way, before examining how different policies might be applied to deliver that overall value. This also implied that consideration of

policy needed to be taken to a relatively high level of detail. At the same time it was essential that the overall broader picture was maintained.

#### 4.3.3 Characterisation of the Coast (used for Consultation Purposes)

An important step in this development was to gain an appreciation the overall character of different areas of the estuary and to convey this message to stakeholders. This would then set the broad context or overarching principles within which more specific objectives for shoreline management could be sensibly developed and considered.

A characterisation of the Theme Areas was, therefore, prepared on the basis of the Theme Review, project baseline condition understanding and consultation responses. A series of pamphlets were produced for each Theme Area to describe the characterisation of the coast. A sample is presented from the following link.

[http://www.severnestuary.net/secg/docs/Issues%20and%20Objectives%20leaflet\\_Penarth.pdf](http://www.severnestuary.net/secg/docs/Issues%20and%20Objectives%20leaflet_Penarth.pdf)

Each pamphlet comprised of a general description and derivation of key values for an area. In addition, the key environmental designations were identified, together with an initial identification of features at risk based on a policy of no further intervention. A brief assessment was also considered as to the degree to which the coast wishes to change and the inherent pressure any intervention on the coast would bring about. These were seen as a good approach to communicating issues and objectives to stakeholders during the consultation period. Refer to Appendix B for further details of this approach.

#### **Mapping**

Figures produced in the SMP2 are derived from mapping within the GIS. Current mapping available to the study partners was provided in 2007. Some areas of baseline maps may have been updated since that time, during the preparation of the SMP2. The GIS presents data at different scales of mapping, appropriate to the scale being viewed. However, for consistency all mapping of information has been carried out based on the 1:50,000 baseline map background.

## 5. Stage 3: Policy Development

This Stage involves four key steps:

- Development of policy scenarios;
- Policy scenario assessment;
- Identification of a preferred scenario; and
- Confirmation of the preferred scenario.

### 5.1 Development of Policy Scenarios (Appendix F)

In order to develop policy scenarios (re-titled as Management Approaches within this SMP2 to avoid any confusion amongst Stakeholders) shoreline Key Policy Drivers were identified from the issues and features tables based on their recognized level of influence and importance (national, regional or local). From this initial analysis primary drivers or controls were identified; where evident, and the basic interactions established. In many cases this then allowed quite obvious policies to be derived and hence ideas towards where Policy Unit delineations are likely to be set.

Where controls or drivers were less clear, specific alternative Management Approaches were considered often at a more detailed level. Consideration of these Management Approaches has then been argued such that a preferred approach to management of the coast emerged. From this individual policy units were then defined.

For this SMP, as the inter-connectivity of flood cells is a significant issue, that factor was considered in detail and close liaison with the team developing the SEFRMS study was carried out during this stage.

The approach applies the basic principles set out in the Guidance, notably:

- The process is clearly objective led.
- That the definition of policy and policy units is taken at the end of the analysis process, not predefining units at the start.
- That distinction is made relevant to each specific area of the coast as to prioritising objectives and that an initial screening process was undertaken at a high level to ensure essential objectives were considered initially.
- That, whilst able to consider the detailed issues important to direct shoreline management, the broader picture of how the whole Severn Estuary functions was maintained.

### 5.2 Policy Scenario Assessment (Appendix G)

Having defined possible policies for future shoreline management, it was necessary to appraise how the coast would evolve under these policy combinations over the 100year timeframe suggested by the SMP2 Guidance from DEFRA.

This stage involved appraising the impact of the 4 Defra policies on identified features and issues along the shoreline. It involves a detailed assessment of all policy options in relation to the individual objectives. In association with this, economic data was obtained using an appropriate analysis system that is equivalent to the Modelling and *Decision* Support Framework (MDSF) system proposed in the Defra Guidance. This approach is mirrored by

the system being used by the Environment Agency for the SEFRMS (see Appendix H for details). Together with information from the SEFRMS, information was assessed to consider the economic cost effectiveness of the preferred policies. The whole process maintains the broader awareness of how the Severn Estuary as a whole is behaving and how policy may be used to develop sustainable shoreline management in the future.

A test was completed to visually illustrate how each Defra Policy Option met the high level objectives for the Severn Estuary and the objectives for the Key Policy Drivers of the Severn Estuary. This exercise was used to formulate the policy scenarios for assessment.

**Management Approach A:** The preferred SMP2 policy option based on the current work undertaken for SMP2.

**Management Approach B:** A modification of Management Approach A, assuming the primary driver is a return to a more natural situation.

**Management Approach C:** A modification of Management Approach A, assuming the primary driver is to protect most assets and so greater hard protection of the coast.

**Management Approach D:** A Management Approach assuming that the current SMP1 policies are continued (i.e.: With Present Management).

### 5.3 Draft SMP2 Main Report Preparation

A draft version of the Severn Estuary SMP2 Main Report was produced to clearly present the approach to the study, the assumptions made and the preferred draft SMP2 policies for the Severn Estuary. The Severn Estuary SMP2 Main Report includes:

- A non-technical explanation providing a background to development of the Plan;
- An overview of the Plan and implication for the Severn Estuary SMP shoreline as a whole (SMP2 development; key factors influencing SMP2 decision making and project assumptions);
- Policy Statements for each Policy Unit of shoreline including:
  - Details of the policies;
  - Justification for the policies;
  - Implications for local objectives.
- Mapping to support the statements.

All information to support the Severn Estuary SMP2 Main Report (as discussed) is included in the accompanying Appendices, and referenced throughout the text to ensure details are easily accessed where required.

## 6. Stage 4: Public Examination

### 6.1 Gain Principal Approval

The SECG were presented with the final SMP2 document and supporting appendices during a specific presentation held in Cardiff on 21 September 2009. Attendance and acceptance of the draft policies proposed is presented as a specific Annex within Appendix B. This provided the wider acceptance of draft policies proposed (in principal) ahead of the Public Consultation exercise. This approach was vital to ensure that the policies and their justifications were presented and accepted by the full SECG before it was agreed that the preferred policy scenario could go forward to public consultation.

### 6.2 Confirm Consultation Strategy

A strategy for the public consultation was agreed through discussion with the PMG at a specific Progress Meeting held on 9 September 2009.

It was decided that the successful format adopted for the June and August KSG events would be mirrored for the Public Consultation events in November 2009. The PMG would lead and manage the consultation process, including the collation of comments received. Atkins Ltd shall provide support through attendance and support for each of the proposed meetings (see Section 6.3).

### 6.3 Public Consultation

Following the issue of the Draft Severn Estuary SMP2, the issues raised through the stakeholder and public consultation will be identified in the consultation report (**Appendix B**). The issues and further information raised will be assessed and revisions made to the text (and in some areas to the policy) where appropriate.

Following the preparation and initial agreement to the Draft SMP2, the public consultation process commenced on the 5<sup>th</sup> October 2009 for a period of 3 months, ending on 10th January 2010. The draft plan together with supporting information will be established on the SMP2 website.

<http://www.severnestuary.net/secg/>

All stakeholders will be notified of the consultation process and, following notices in the local press, meetings will be held to allow discussion of the plan. Presentations of the draft plan will be given at the following locations (*timings to be confirmed*).

- Penarth, 11th November 2009;
- Bristol, 12th November 2009;
- Gloucester Docks, 13th November 2009.

Responses will be collated at these road shows and during the consultation period. The consultation report will form part of Appendix B.

## 7. Stage 5: Finalise the Plan

The issues raised through the consultation on the Draft SMP2 are to be identified in the consultation report (Appendix B). These issues and further information will be assessed and revisions made. With the amendments made, the SMP2 will be finalised in agreement with the PMG and the SECG. A final dissemination of the findings of the plan is to be undertaken and the SMP2 will be taken forward to each Council for adoption.

# Annex A Severn Estuary SMP2 Review Scoping Report (Sept 2008)

## Introduction

Shoreline constantly change due to waves, tides and coastal processes. The amount of physical change depends on many things and happens over timescales from seconds to centuries. The changing coastline has also been influenced by people's actions throughout the years particularly by attempts in some locations to stop erosion or flooding. This has left us with a complex and difficult legacy to manage in places, presenting challenges in terms of sustainability, especially in the light of potential future climate change and sea level rise.

In the last 10 years we have made significant progress in understanding and mapping coastal processes through the first generation of Shoreline Management Plans (SMPs) which cover the 6000 kilometres of coast in England and Wales. SMPs provide a large-scale assessment of the risks associated with coastal processes and present a long term policy framework to reduce these risks to people and the developed, historic and natural environment, in a sustainable manner. An SMP is a high level document that forms an important element of the strategy for flood and coastal erosion risk management. Coastal groups, made up primarily of coastal district authorities and other bodies with coastal defence responsibilities, provide a forum for discussion and co-operation and play an important part in the development of SMPs for their area.

Many operating authorities have adopted the recommendations of their SMP as a basis for production of individual strategic plans, monitoring programmes and studies for all or part of their coastline and, where proven by strategic plans, for investment in appropriate capital improvement projects. The first generation SMPs were both innovative and a big step forward towards better understanding of our coast and the need for strategic planning. They are now due for review to ensure full account is taken of latest information and future challenges. A renewed effort is needed to identify sustainable and deliverable solutions to manage risk, working with natural processes wherever possible.

Government and lead authorities have a responsibility to ensure that investment of taxpayers' money is justified by the benefits delivered. SMPs attempt to use best science to achieve sustainable policies. For example, natural coastal processes might make it inadvisable to build defences at certain locations because of adverse knock-on effects elsewhere. At other locations, the likely cost of defences compared to the assets protected may make investment in defences uneconomic and again the SMP should reflect this. SMPs provide a long-term vision for a sustainable coast where future decisions can be taken with confidence using the best available evidence and effective engagement with local communities.

The SMP2 will be prepared in accordance with the Defra SMP guidance documents Volumes 1 and 2 (March 2006). Although published by Defra these documents are also appropriate for use in Wales – this approach is supported by WAG.

Table 1.1 within this guidance recommends an approach to the production of SMP2 outlining six stages of work between inception and completion.

This document outlines the tasks completed for Stage 1 of the above approach - 'Scope the SMP' prior to commencing the other 5 Stages.



### Stage 1: Scope the SMP

Task	Description	Typical Activities	Indicative Timing
1.1	Initiate SMP	Agree Client Steering Group [CSG] membership Decide upon approach to produce SMP Decide scope of work to produce the SMP	Start
1.2	SMP Definition	Confirm SMP and study boundaries Identify any outstanding study requirements for the SMP Agree form of SMP	Up to 3 months duration
1.3	Define Stakeholder Engagement	Define stakeholder engagement strategy Identify stakeholders, status and details Contact stakeholders and inform them of SMP process	Up to 6 months duration
1.4	Data Collation	Initiate data collection process and obtain data for the SMP Data management Initial review of data	Up to 6 months duration
1.5	Additional Investigations (if required)	Determine estuary limits (if necessary) Undertake any modelling/process analysis (if necessary) Update defence information (if necessary) Obtain heritage information (if necessary)	1 month up to 12 months duration, depending upon extent of any studies

Table 1: Stage 1: Scope the SMP  
(Shoreline Management Plan Guidance Volume 2: Procedures, Defra March 2006)

The aim of the report is to provide a record of activities undertaken by the Severn Estuary Coastal Authorities Group (the Coastal Group) and to collate information relevant to the various sub tasks. This report has no specific external function in the SMP process.

The review covers the coast from Anchor Head (Weston-super-Mare) in Somerset to Lavernock Point in South East Wales.

#### Task 1.1: Initiate SMP

##### Aim

To formalise the arrangements for development of the SMP review

##### Activities

The Coastal Group was required to define how the SMP review should be undertaken, by whom (in-house or commission specialists) and how it should be managed, prior to commencing its development (Stage 2 onwards). The activities to achieve this requirement were as follows:

- (a) Agree Client Steering Group membership.
- (b) Decide upon approach to produce the SMP, (including procurement strategy, if appropriate).
- (c) Determine scope of work to produce the SMP.

##### Delivery

- (a) Agree Client Steering Group membership.

The Severn Estuary Coastal Authorities Group has established a Client Steering Group (the Steering Group) to undertake the SMP review. The Steering Group membership was decided through discussions at the Coastal Group meeting on 2nd November 2006.

Membership comprises the following:

North Somerset District Council

Bristol City Council  
South Gloucestershire Council  
Stroud District Council  
Forest of Dean District Council  
Monmouthshire County Council  
Newport City Council  
Cardiff City Council  
Vale of Glamorgan Borough Council  
Environment Agency SW Region  
Environment Agency Midlands Region  
Environment Agency Wales  
Caldicot & Wentlooge IDB  
Lower Severn IDB  
Defra  
Gloucestershire County Council  
Welsh Assembly Government (WAG)  
Natural England  
RSPB  
Countryside Council for Wales (CCW)  
The National Trust

The roles and responsibilities of the Steering Group are:

- Providing client expertise in determining scope and extent of the Shoreline Management Plan review.
- Delegation of the procurement management and administration of consultants and contracts to the Environment Agency.
- Maintaining liaison with Defra.
- Reporting back to the Coastal Group and client organisations.
- Working in partnership with the consultant to develop issues to be dealt with and priority of issues objectives/draft proposals.
- Directing further consultation, including methods and material to be employed.
- Overseeing public consultation exercise.
- Seeking ratification of SMP policies.
- Keeping members organisations updated.
- Identifying key stakeholders and representatives.
- Convening meetings of the Elected Members Forum and Key Stakeholder Groups.
- Delegating any of the above to the Project Management Group for implementation.

(b) Decide upon approach to produce the SMP.

The Steering Group has set up a Project Management Group (the Management Group) to oversee the day to day management of the SMP review. The Management Group will initially be made up of representatives from the following organisations:

- Environment Agency South West, Midlands, Wales
- Monmouthshire District Council
- Bristol City Council

The roles and responsibilities of the Management Group are:

- Provide day-to-day project management of the SMP review.
- Provide administrative support.
- Procure main SMP consultant.

- Undertake some elements of “Stage 1: Scope the SMP”, eg. Initiate the SMP & SMP definition.

It was decided at a Coastal Group meeting on 13th March 2008 that a consultant will be procured to undertake the main stages of the SMP review and will be appointed through the Environment Agency’s NEECA (National Engineering and Environmental Consultancy Agreement 2) framework.

The Project Management Group are completing parts 1.1 & 1.2 of the Scope internally.

Monmouthshire District Council are the Lead Authority promoting the project, with the Environment Agency (SW Region) providing staff to manage the project. The Project Appraisal Report (PAR) is submitted to Defra and the Welsh Assembly Government (WAG). The Streamlined Project Initiation Document (PID) is submitted to the Environment Agency South West Region Project Appraisal Board.

Monmouthshire District Council will:

- Be the lead Authority promoting the project.
- Be the lead coast protection operating authority for the project.
- Procure partnering support to assist with the production of the SMP2, particularly during its early stages.
- Receive and manage monies from WAG for procurement of the main SMP consultant and to reimburse the Environment Agency for its authorised expenses. These monies will be passed through the Environment Agency.
- Prepare relevant reports and information relating to the financial and budgetary monitoring and implementation of the project.
- Apply to Defra and WAG for additional monies should this prove necessary and as agreed by the Steering Group.
- Provide representation on the Steering Group and Management Group.

The Environment Agency (SW Region) will:

- Provide staff to project manage the project.
- Provide staff to aid completion of Stage 1 (Scope the SMP) of the project.
- Be responsible for the procurement and management of the main SMP consultant, who will have a contract with the Environment Agency (SW Region).
- Receive and manage monies from Defra for procurement of the main SMP consultant.
- Ensure that all contractor liaison will be undertaken using the Environment Agency procurement guidelines.
- Draw monies down from Monmouthshire District Council for procurement of the main SMP consultant and for reimbursement of any other expenses incurred, with the agreement of the Steering Group.
- Deliver the final project report, which satisfies Defra & WAG requirements and those of the Steering Group.
- Provide representation on the Steering Group and Management Group.
- Carry out any other duties with the agreement of the Steering Group.

A key part of the SMP review process will be Stakeholder Engagement. A separate strategy document covering how this will be managed will be produced by the SMP Consultant. The Strategic Environmental Assessment (SEA) will be produced by the consultant. The Appropriate Assessment will be produced by the consultant.

(c) Determine scope of work to produce the SMP.

The SMP review will be prepared in accordance with the Defra SMP guidance documents Volumes 1 and 2 (March 2006). Although published by Defra these documents are also appropriate for use in Wales – this approach is supported by WAG. These documents provide a sound basis on which to carry out the review. The tasks and activities within the guidance will be reflected in the tender documents for the procurement of the consultant.

Six stages are identified in the Defra guidance, where full details can be found:

- Stage 1: Scope the SMP.
- Stage 2: Assessments to support policy development.
- Stage 3: Policy development.
- Stage 4: Public examination.
- Stage 5: Finalise plan.
- Stage 6: Plan dissemination.

WAG have expressed an intention to produce additional supplementary guidance for the production of SMP2s in Wales. Precise details are not yet available but it is likely that additional guidance will be provided on tasks relating to Stakeholder Engagement (their New Approaches program and how to incorporate this into SMP2s) and incorporating coastal/estuarial flood risk management in SMP2s. It is hoped that this supplementary guidance will be available by the end of 2008. Should any additional activities be identified, these will be assessed for appropriateness and included where necessary.

### **Task 1.2: SMP Definition**

#### Aim

To define the requirements for the SMP review.

#### Activities

The activities that needed to be undertaken to establish the scope of the SMP and information available for its production were as follows:

- (a) Confirm SMP and study boundaries.
- (b) Identify any outstanding study requirements for development of the SMP.
- (c) Agree form of the SMP (e.g. web-enabled).

#### Delivery

- (a) Confirm SMP and study boundaries.

The Defra SMP guidance reviewed the appropriateness of existing SMP boundaries and made recommendations of suitable changes, based upon process/shoreline evolution characteristics alone, including the possibility of merging some SMPs. This review took into account findings from the Futurecoast study (Halcrow, 2002) and the English Nature internal report “Shoreline Management Plans: advice on key boundary locations” (Halcrow, 2001).

Development of the first round of SMPs was based upon littoral cell boundaries, which had previously been defined at zones of sediment convergence and divergence. The review of the first round of SMPs identified that there were a number of locations where the existing SMP boundaries were inappropriate, for example, where boundaries divided major estuaries or landforms.

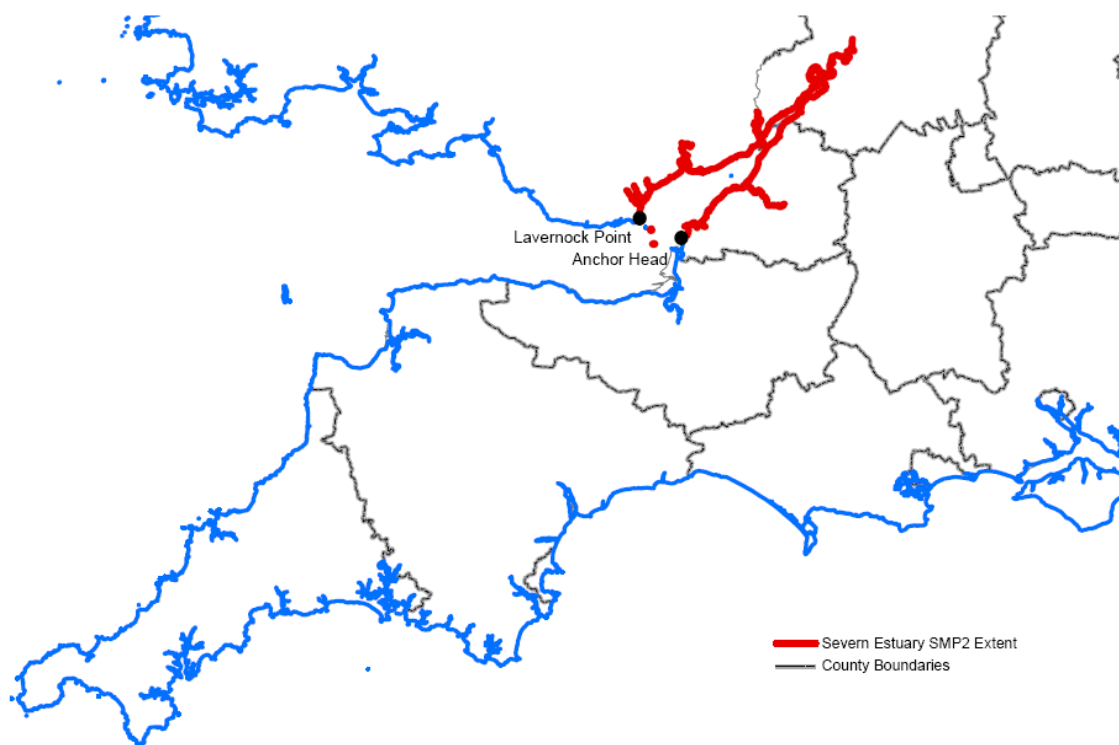
Appendix E of the Defra guidance, Open coast SMP management boundaries, contains a summary review of the existing SMP boundaries for each of the present SMP areas. For the Severn Estuary SMP review, the following boundaries are recommended:

- Brean Down – change to Anchor Head (north of Weston-super-Mare).
- Lavernock Point – no change.

Whilst Brean Down marks a suitable boundary between Bridgwater Bay and the Severn Estuary, it is notable that a potential breach of the dunes to the south of Brean would potentially affect Weston Bay, to the north. To take account of this potential linkage it may be preferable to move the boundary to the north to either Anchor Head (next headland to the north) or Sand Point (a better Bridgwater – Severn boundary, but again has outflanking issues).

Based on the above, a change to Anchor Head (north of Weston-super-Mare) is considered as this would avoid outflanking issues and would provide a reasonable divide between the open-coast Bridgwater frontage of the North Devon and Somerset SMP Review and the Severn Estuary.

The above change was agreed by the Coastal Group in September 2006 and Defra have been made aware of this.



**Figure 7.1 - Extent of the Second Generation Shoreline Management Plan**

In accordance with Defra guidelines, the SMP boundaries within estuaries will ensure that they either match or overlap with Catchment Flood Management Plans (CFMP's) but as a minimum they will reach as far as the tidal-limit of these estuaries.

We have identified this as an area for additional investigation – see section 1.5 (page 14) for more details.

CFMP's being prepared that impact on this SMP are:

- North and Mid Somerset Catchment Flood Management Plan.
- Bristol Avon Catchment Flood Management Plan.
- Severn Tidal Tributaries Catchment Flood Management Plan.
- Severn Catchment Flood Management Plan.
- Wye and Usk Catchment Flood Management Plan.
- Eastern Valleys Catchment Flood Management Plan.
- Taff and Ely Catchment Flood Management Plan.
- Ogmore to Tawe Catchment Flood Management Plan.

See Appendix B and H for relevant documentation and maps.

(b) Identify any outstanding study requirements for development of the SMP.

There have been various schemes, studies and projects undertaken since the completion of the original SMP in 1998, some of which address the recommendations of the original SMP. Those known about are listed in Appendix C.

The plan also highlighted areas of further research required, these were summarised from SMP 1 Volume 2 in Appendix D.

The Southwest Regional Coastal Monitoring Programme commenced in 2006 and is delivering an extensive monitoring package along the coastline incorporating beach profile surveys, bathymetric surveys, wave conditions, LiDAR, aerial photography and habitat mapping as well as providing a publicly accessible data storage facility. Similarly, WAG have just set up the Welsh Coastal Monitoring Centre to cover the Welsh coastline. The centre was initiated earlier this year and as such is still in its infancy at present but it eventually aims to cover a similar array of coastal monitoring activities to those of the southwest regional programme. Further details of the Welsh Coastal Monitoring Centre will be provided to the consultants during the project as and when it becomes available.

(c) Agree form of the SMP

The final delivery of the SMP will be in electronic form, available on the Coastal Group website (<http://www.severnestuary.net/secg/>), either to be viewed or downloaded in PDF format. It will also be available to Steering Group members in hard copy.

### **Task 1.3: Define Stakeholder Engagement**

#### Aim

Stakeholder involvement is an important part of the SMP development process. In setting up the SMP the Coastal Steering Group had to decide on what approach to take in terms of proactive stakeholder interaction to get 'buy in' to the SMP process and the subsequent decisions made on their behalf and the form that this should take.

#### Activities

Identifying the stakeholders and engaging with them at an early stage is an important part of the SMP process. The following activities were identified to be undertaken at this scoping stage:

- (a) Define stakeholder engagement strategy.
- (b) Identify the stakeholders, their status and their contact details.
- (c) Contact stakeholders and inform them of the SMP process.

### Delivery

(a) Define Stakeholder Engagement Strategy.

A draft Stakeholder Engagement Strategy document will be produced by the consultant identifying:

- What we need to do.
- Why we need to work with Stakeholders.
- Who we need to involve.
- How we will involve Stakeholders.

This Engagement Strategy will be aligned with the Severn Estuary Flood Risk Management Strategy and will follow Defra guidance.

Welsh Language Act - welsh translation guidance provided by appropriate translators.

The document will be made available through the Coastal Group website (<http://www.severnestuary.net/secg/>).

(b) Identify the stakeholders, their status and their contact details.

Potential Stakeholders are those who are likely to be affected by the SMP review policies. Those who may be interested in the consultation process will include statutory and non-statutory bodies, planning authorities and those representing national and local interests, as well as local business interests, landowners, occupiers and the general public. In general, the potential stakeholders can be divided into four main groups:

- Client Steering Group.
- Elected Members Forum.
- Key Stakeholders.
- Other Stakeholders.

(c) Contact Stakeholders and inform them of the SMP process.

The potential Stakeholders, will be engaged, invited to register and be included in the consultation on the SMP review.

### **Task 1.4: Data Collation**

#### Aim

To obtain up-to-date accurate and complete datasets upon which to build the SMP.

#### Activities

- (a) Initiate data collection process and obtain data for the SMP.
- (b) Data management.
- (c) Initial review of data.

#### Delivery

(a) Initiate data collection process and obtain data for the SMP.

The Defra guidance outlines the data requirements for the SMP review. This includes data from the first generation SMP, base data (for example, Ordnance Survey mapping), thematic data,

locally and regionally-specific data, new data (having been produced following the first generation SMP), and other plans (for example, other organisations management plans). Principal data providers are the Environment Agency, Local Authorities and National Agencies such as Natural England. In addition to the nationally available datasets, there will be a need to include non-standard data and locally derived datasets.

For example:

- Ancient Woodland Inventory
- AONB (Areas of Outstanding Natural Beauty)
- BAP Priority Areas
- Catchment Flood Management Plans
- Character Areas
- County Wildlife Sites
- Designated Sites
- EA Flood Zone Mapping
- Historic Aerial Photography
- Landfill Areas
- LiDAR
- Natural Areas
- Severn Estuary CHaMP

The list in Appendix C identifies schemes, studies and projects which are currently known to be available.

Data has also been identified through work on the Severn Estuary Flood Risk Management Strategy (SEFRMS) which can be used to support the SMP Review.

The first Severn Estuary Shoreline Management Plan (SMP1) Non-Technical Summary is available on the Coastal Group website at: <http://www.severnestuary.net/secg/>. A full copy of the Severn Estuary SMP will be made available with the Scoping Report.

(b) Data management.

Fundamental to our ability to make informed decisions in our development of the SMP is the need for good quality data. It is our intention to ensure that data is:

- Fully compliant with all Legislation and Environment Agency guidelines.
- Fit for the purpose required by Defra, WAG, the Environment Agency and the Coastal Group.
- Easily accessible by the people producing the SMP2.
- Part of a widespread culture of informed data sharing.
- Fully managed and quality controlled.
- Used to provide all those involved in the production of the SMP2 with the information and knowledge to manage the work.

In order to support these broad principles, we must ensure that everyone who is involved in the production of the SMP or who will use it:

- knows what data is needed and what data is available.
- knows where the data is and that they can access the data.
- knows how and why the data was collected and to what degree of accuracy and precision.
- is capable of accessing and presenting the data in the required format.
- does not duplicate or waste effort in collecting, managing and analysing data across the organisation.
- understands and adheres to any legal restrictions regarding the data.
- is capable of efficiently and effectively meeting demands for information.



- knows who the experts are and how they can be contacted.

For all stages of the development of the SMP2, an Environment Agency Project Data Form will be completed. Appendix G contains the form for this, Stage 1 - 'Scoping the SMP'.

A key requirement is to record information used during the development of the SMP. Information gathered will need to be referenced and recorded in a bibliographic database. Once developed, the database will continue to be populated throughout SMP development.

(c) Initial review of data.

Appendix C contains an initial list of the data identified as being available at the time of writing. This will develop as more data comes to light and will be recorded in the Bibliographic database. The consultant shall review all the data available to identify any gaps.

### Task 1.5: Additional Investigations

#### Aim

To undertake any further studies to provide information necessary for the review of the SMP.

#### Activities

We identified that the following activities were required prior to the SMP development to enable clear specification of the work required and to minimise any unnecessary delays to the programme once the SMP development had commenced.

- (a) Determine estuary limits.
- (b) Review and where necessary update defence information e.g. National Flood and Coastal Defence Database (NFCDD).
- (c) Obtain heritage information.

#### Delivery

- (a) Determine estuary limits

The second generation SMPs will include estuaries up to their tidal limit. This is a change from the SMP1 which only went up to the coastal protection limit. Table 1 lists the rivers and estuaries that will be included in the SMP2 review and their tidal limits.

List of Inlets /Rivers	Part of Larger Estuarine System	Stated Tidal Limit	Grid Ref.
River Wye	n/a	Bigsweir Bridge	353869E 205104N
River Usk	n/a	Newbridge on Usk	338563E 194729N
River Rhymney	n/a	Weir	320874E 179879N
River Taff (via the Cardiff Bay Barrage)	Cardiff Bay	Cardiff Bay Barrage	319130E 172660N
River Ely (via the	Cardiff Bay	Cardiff Bay Barrage	319130E

<b>List of Inlets /Rivers</b>	<b>Part of Larger Estuarine System</b>	<b>Stated Tidal Limit</b>	<b>Grid Ref.</b>
<b>Cardiff Bay Barrage)</b>			<b>172660N</b>
<b>Ebbw River</b>	<b>n/a</b>	<b>Refuse Tip</b>	<b>330452E 185695N</b>
<b>Goldcliff Pill</b>	<b>n/a</b>	<b>Fisher's Gout</b>	<b>336709E 183024N</b>
<b>River Banwell</b>	<b>n/a</b>	<b>New Bow Sluice</b>	<b>335309E 166018N</b>
<b>River Yeo</b>	<b>n/a</b>	<b>Tutshill Ear</b>	<b>338152E 165835N</b>
<b>Blind Yeo</b>	<b>n/a</b>	<b>Blind Yeo Pumping Station</b>	<b>339221E 170223N</b>
<b>River Avon</b>	<b>n/a</b>	<b>Netham Weir</b>	<b>361609E 172600N</b>
<b>Oldbury Pill</b>	<b>n/a</b>	<b>Oldbury Pill Sluice</b>	<b>360274E 190673N</b>
<b>Berkeley Pill</b>	<b>n/a</b>	<b>Berkeley Pill Sluice</b>	<b>366665E 199892N</b>
<b>West Channel</b>	<b>River Severn</b>	<b>Maisemore Bridge</b>	<b>381696E 221222N</b>
<b>East Channel</b>	<b>River Severn</b>	<b>Llanthony Weir</b>	<b>382199E 218217N</b>

Table 7.1 - Stated Tidal Limits of Rivers and Estuaries to be included in the SMP2 review

See Appendix H for maps illustrating the upstream limit within the main estuaries and rivers shown in Table 6.1

(b) Review and where necessary update defence information e.g. National Flood and Coastal Defence Database.

A recent proposal sets out the requirements for undertaking surveying work to provide the South Devon and Dorset Coastal Authorities Group (SDADCAG) with the necessary data to enable an update of the National Flood and Coastal Defence Database (NFCDD) for Coastal Defence assets. A similar proposal is required for the Severn Estuary Coastal Authorities Group and this is currently being considered.

If undertaken and completed, this survey work would be used to inform the Severn Estuary SMP Review. The work would focus on the updating of NFCDD man-made defences. As well as collecting new data for coastal defence assets, data currently held with NFCDD would also be validated for the fields where the consultant/surveyor has the required knowledge to do so.

(c) Obtain heritage information.

The historic environment comprises all past traces of human existence. It includes evidence for past environments, archaeological sites, historic buildings and the historic aspects of the wider landscape. These assets are unique and, once damaged or destroyed, cannot recover or be re-created. They are valuable for their own sake, as repositories of evidence for human activity over millennia; for their contribution to landscape character, sense of place and community identity; and as an economic asset which underpins leisure and tourism (English Heritage, 2006).

English Heritage have produced guidance notes to aid the SMP review (Shoreline Management Plan Review and the Historic Environment: English Heritage Guidance, 2006). Cadw is the historic environment service of WAG. As far as we are aware, Cadw have not produced any equivalent guidance documents. In order to ensure that the historic environment is adequately considered, the Consultant will make contact with:

- Local Authority Conservation Officers and Archaeological Officers, specifically in England the County Archaeologists and Historic Environment Records (HER) staff.
- The appropriate English Heritage (EH) Regional Office, and Coastal Strategy Officer.
- The appropriate Cadw Officer for information on the Welsh historic environment.

From the above contacts it is hoped to obtain information on:

- World Heritage Sites
- Scheduled Monuments.
- Listed Buildings.
- Undesignated Sites and Monuments.
- Historic landscape Character Areas
- Conservation areas.

This data will be available in GIS format to aid the SMP review. The HER is updated regularly.

Additional Activities undertaken as part of the Scoping Stage

*Environment Agency Strategic Overview for the Coast*

Under the Strategic Overview for the Coast, the Environment Agency will be responsible for overseeing and quality assuring the production of Shoreline Management Plans in England. WAG have not given the Environment Agency in Wales the Strategic Overview and as such they remain responsible for overseeing and quality assuring the production of Shoreline Management Plans in Wales. As the SMP2 study area bridges the two political areas, the plan will need to be signed off by both the English and Welsh political processes.

a) For England

To assist in the approval and quality review process a Quality Review Group, led and managed by the Environment Agency, has been established. English Regional Directors will sign off each SMP in their region, following a recommendation from the Quality Review Group (QRG). This is a similar approach to that used for Catchment Flood Management Plans. Appendix I contains the QRG's terms of reference, which will be available on the internet in the near future.

In addition to providing assistance to the approval and quality review process of SMPs, the National Review Group will be responsible for ensuring that SMPs are nationally consistent in setting out a long term course of action for the coast that is sustainable, affordable and, most importantly, that plans are "fit for purpose".

Although the English National Review Group is being led by the Environment Agency it will also involve other national stakeholders including Local Authorities and Natural England. Those on the group will have the necessary understanding and experience to ensure that a quality product is obtained in all cases. Although membership to the group may change in the future, the core group members will remain the same where possible to ensure continuity. The group will be responsible for reviewing all English SMP2s until they are complete in April 2010.

Each plan that is submitted to the group for consideration will be considered against set quality criteria to ensure that the SMP meets the principles set out in the Guidance Note and offers both a vision for the coast and also the appropriate actions in order to achieve the vision.

The National Review Group will assess both the consultation draft version of the SMP2 and the adopted plan, noting that this may be different in some cases, for example, where local considerations have driven a specific option. Once the Review Group are content that the Plan meets the quality criteria, it will make a recommendation to Regional Directors for sign-off.

For continuity with NRG's consideration of strategies that sit within the framework of an SMP2, membership of the Review Group will also sit on the National Review Group. This will provide the business with a degree of comfort that a truly strategic approach is being taken on the coast.

b) For Wales

No information is currently available on this. WAG are currently compiling the Welsh Quality Review procedures and it is anticipated that this will be available by the end of 2008.

Study Boundaries and Documentation

Extract from SMP guidance regarding review of SMP1 boundaries

Annex E1: Review of SMP1 boundaries

<b>SHORELINE MANAGEMENT PLAN</b>	
<b>Brean Down to Lavernock Point (7e &amp; 8a)</b>	
<b>BOUNDARY 1: Brean Down</b>	
<i>Does the boundary <b>NEED</b> to change?</i>	<i>: Possibly</i>
Whilst Brean Down marks a suitable boundary between Bridgwater Bay and the Severn Estuary, it is notable that a potential breach of the dunes to the south of Brean would potentially affect Weston Bay, to the north. To take account of this potential linkage it may be preferable to move the boundary to the north to either Anchor Head (next headland to the north) or Sand Point (a better Bridgwater – Severn boundary, but again has outflanking issues).	
<i>Should a boundary change be considered?</i>	<i>: Yes</i>
Based on the above, a change to Anchor Head (north of Weston-super-Mare) is considered as this would avoid outflanking issues, and would provide a reasonable divide between the open-coast Bridgwater frontage and the Severn Estuary.	
<b>BOUNDARY 2: Lavernock Point</b>	
<i>Does the boundary <b>NEED</b> to change?</i>	<i>: No</i>
There are no interactions across this point that indicate this boundary is unacceptable.	
<i>Should a boundary change be considered?</i>	<i>: Yes</i>
Consider changing to Penarth Head. Geomorphology changes at Penarth Head, and differences in shoreline, which occur either side of Cardiff Bay, would suggest that Penarth Head might represent a more logical boundary.	
<b>SMP AREA</b>	
<i>Are there other boundaries to consider?</i>	<i>: Yes</i>
There are no significant alongshore features that would warrant sub-division of this frontage, however it will be important to set an appropriate up-estuary boundary.	
<i>Are there major inter-SMP considerations?</i>	<i>: Yes</i>
Assessment of coastal processes and physical interactions should not be constrained by the SMP management boundaries. At Brean Down it will be important to recognise the potential for a breach through from the shoreline to the south. It is also important that the process interactions between the Severn Estuary and the Bristol Channel are appreciated in SMP development.	
<i>Should the SMP area be altered?</i>	<i>: Possibly</i>
Consider changes of both boundaries, to Anchor Point and Penarth Head.	
<b>ESTUARIES</b>	
See separate Appendix F on the Integration of Estuaries for details relating to Severn Estuary.	

Annex E1-31

Letter sent to Defra confirming SMP boundary change

**From:** Carol Hall  
**To:** jim.hutchison@defra.gsi.gov.uk  
**Subject:** North Devon and Somerset Coastal Group

Dear Mr Hutchison

At the recent North Devon and Somerset Coastal Group meeting we discussed the DEFRA SMP2 guidance suggestion to change the boundary of our SMP. This affects Brean Down and Weston-Super-Mare in Somerset. The Group agreed to move the boundary from Brean Down to Anchor Head (Birnbeck Island) at Weston Super Mare.

The Group then asked me to take this change to the Severn Estuary Coastal Group as this change of course affects them. The Severn Estuary Group also agreed to the change.

The immediate impact of this is that North Somerset Council will now be members of both Coastal Groups.

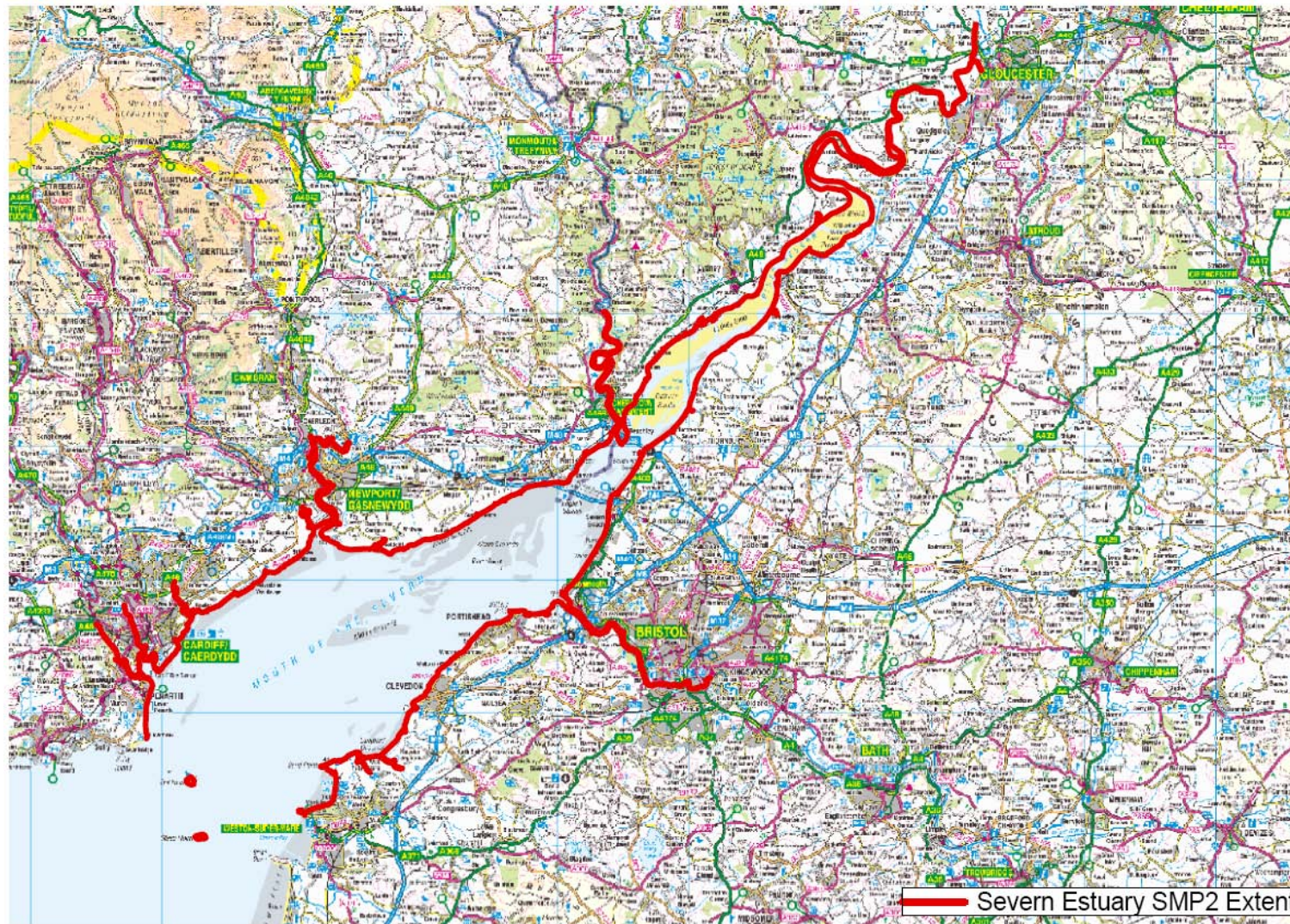
The change of the boundary will be included in the development of the SMP2, when the time comes.

If you have any queries please contact me.

Carol Hall  
Technical Secretary to the North Devon and Somerset Coastal Group

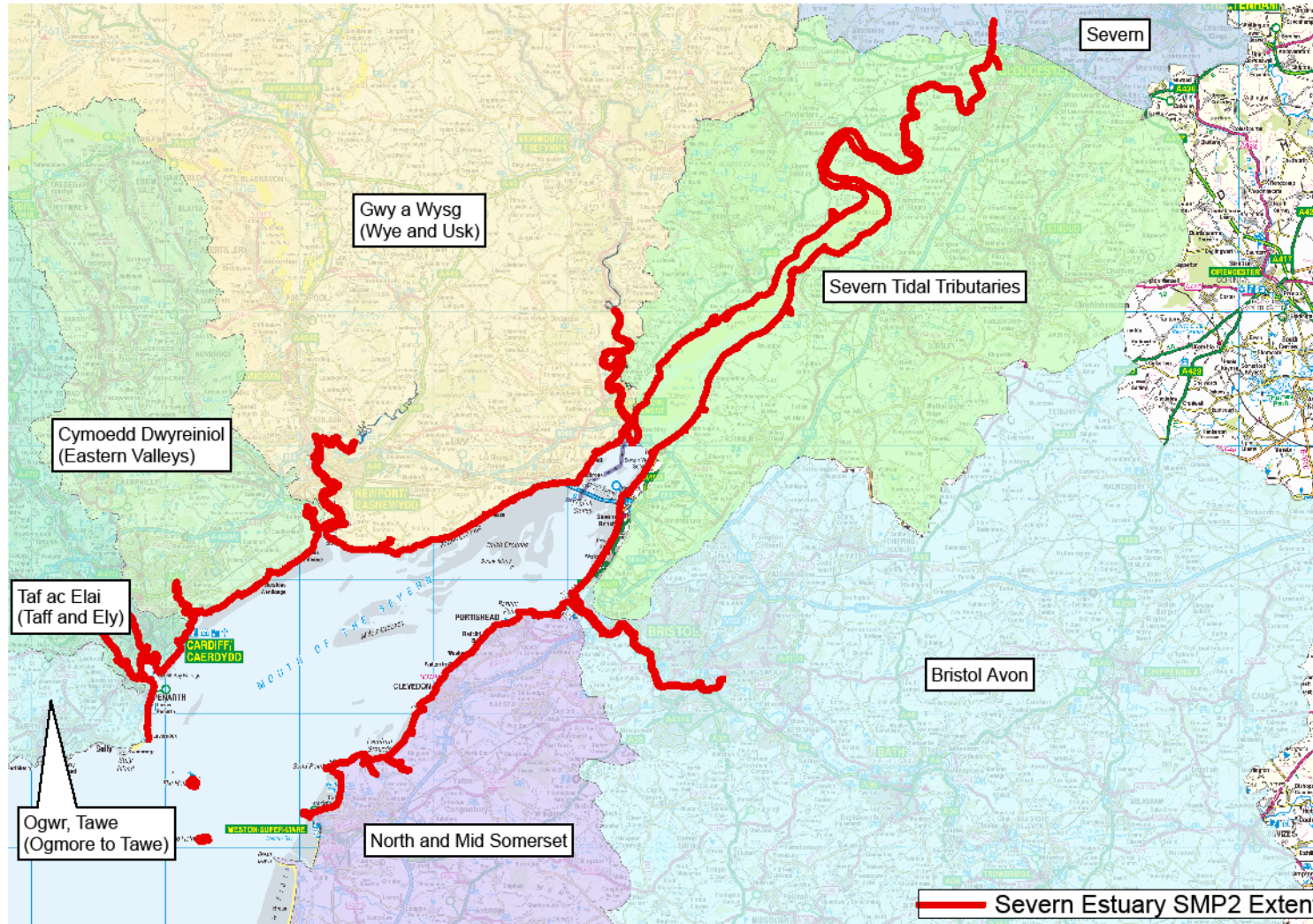
**CC:** humphrey.temperley@devon.gov.uk; humphreytemperley@hotmail.com

### Extent of the Severn Estuary Shoreline Management Plan Review



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CFMPs in the Severn Estuary Shoreline Management Plan Area.



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Severn Estuary Schemes, Studies and Projects undertaken since the original SMP was completed

South West Region

SW Region Tidal Flood Risk Mapping

Considered tidal flood plain defences, and the affect of breaches of some of those defences, at priority sites around the South West coastline.

Royal Haskoning, 2000. Numerical wave/tide model of the Bristol Channel and outer Severn Estuary

Welsh Office, 2000. Bristol Channel – resources and constraints

ABP Research, 2000. Gwent Levels hydraulic modelling study, Objective A: Joint Probability surge tide and wave analysis, ABP Research & Consultancy Ltd. Research Report No R 818.

Allen, JRL, 2000. Sea Level, salt marsh and fen, Shaping the Severn Estuary levels in the later Quaternary (Ipswichian – Holocene). Archaeology in the Severn Estuary.

Velegrakis, A F, Houghton, A, Thompson, C and Collins, M B. 2001. Morphological Development and Sediment Dynamics of the Middle Grounds Bank ( Severn Estuary ) Technical Report for H R Wallingford, Report No EX4373.

Defra, 2002, FutureCoast. Published by Defra on CD Rom.

Atkins, 2002. Bristol Channel Flood Warning System

Allen, JRL, 2002. Interglacial high-tide coasts in the Bristol Channel & Severn Estuary, southwest Britain: A comparison for the Ipswichian and Holocene. Journal of Quaternary Science. 17, 1, 69-76.

Regional Extreme Tide Levels (2003. Environment Agency. Presents tidal extreme water level data derived for sites throughout the South West & Severn Estuary region.

Royal Haskoning, 2004. North Wessex proto Coastal Habitat Management Plan [ChaMP]. Report to English Nature and Environment Agency. Sept 2004.

Atkins, 2004. Gwent Levels Foreshore management Plan: Historic Analysis of Foreshore Evolution, Scheme monitoring Options, Report to Environment Agency Wales

ABPmer, 2004. A Review of the Bristol Channel Sediment Regime, ABP Marine Environmental Research Ltd, Report No R1661, for RWE Npower plc.

ABPmer, 2005. Avonmouth to Aust Tidal Scheme: Joint Probability Analysis of Waves & Water Levels, ABP Marine Environmental Research Ltd, Report No R1225.

Babtie Brown & Root, ABPmer, Royal Haskoning, 2005, Severn Estuary Coastal Habitat Management Plan, [ChaMP], Phase 1 Report: Conceptual Understanding, Habitat Inventory and Habitat Behaviour Units, Draft, July 2005.

ABPmer, 2005, Severn Estuary CHaMP Morphological Assessments Part A: Regime Modelling, ABP Marine Environmental Research Ltd, Report No R1225

English Nature & The Countryside Council for Wales, 2005. English Nature & The Countryside Council for Wales advice for the Severn Estuary Special Protection Area given under Regulation 33(2) of the Conservation ( Natural Habitats ) Regulations 194.

ABPmer, 2006,. Severn Estuary CHaMP Morphological Assessments part E: Historical Trends Analysis, ABP Marine Environmental Research Ltd, Report No R1260e.

Carling, PA, Radecki-Pawlik, A, Williams, JJ, Rumble, B, Meshkova, L, Bell P, and Breakspear, R. 2006. The morphodynamics and internal structure of intertidal fine-gravel dunes: Hills Flats, Severn Estuary, UK, Sedimentary Geology, 183, 159-179.

South West Regional Coastal Monitoring Programme (2006 - 2010)

Five year programme within the south west region to include: beach profile surveys, bathymetric surveys, aerial photography, LiDAR, habitat mapping and wave/tidal measurement.

ABPmer, 2006. Severn Estuary Coastal Habitat Management Plan [ChaMP], ABP Marine Environmental Research Ltd, Report No 1260.

Midlands Region

Tidal Severn Flood Risk Management Strategy EA, March 2006

Fluvial Severn Flood Risk Management Strategy EA, October 2006

Midlands Flood Warning Review Study Lower Severn Area (Severn Estuary)  
Jacobs June 2007

Hatherly Brook SFRM Capita Symonds 2007

River Twyver SFRM Halcrow 2006

Wootton Brook SFRM Halcrow 2007

River Frome model (belongs to Stroud DC and licensed to the Agency)  
Capita Symonds 2008

River Lyd SFRM Capita Symonds 2005

Haw Bridge / Tirley Pre-Feasibility Study EA, May 2003

Apperley Pre-Feasibility Study EA, 2003

Frome Pre-Feasibility Study EA, 2003

Berkeley Pre-Feasibility Study EA, March 2004

River Severn Flood Defences Hempsted Cell Pre-Feasibility Study EA, August 2000

Minsterworth Ham Pre-Feasibility Study EA, March 2003

Pool Meadow, Alney Island, Gloucester Pre-Feasibility Study EA, June 2001

Gloucestershire County Council  
 Strategic Flood Risk Assessment for Minerals & Waste Development Framework Level 1. Draft April 2008. Halcrow Group Ltd.

Forest of Dean District Council  
 Strategic Flood Risk Assessment for Local Development Framework Level 1. Draft April 2008. Halcrow Group Ltd.

Gloucester City Council  
 Strategic Flood Risk Assessment for Local Development Framework Level 1. Draft April 2008. Halcrow Group Ltd.

Stroud District Council  
 Strategic Flood Risk Assessment for Local Development Framework Level 1. Draft April 2008. Halcrow Group Ltd.

Tewkesbury Borough Council  
 Strategic Flood Risk Assessment for Local Development Framework Level 1. Draft April 2008. Halcrow Group Ltd.

Bristol City Council / South Gloucestershire Council / Lower Severn Drainage Board  
 Strategic Flood Risk Assessment Avonmouth / Severnside. January 2007. Capita Symonds

Works between Sharpness and Haw Bridge 2000 – 2008:

Bank	Description
Left	<ul style="list-style-type: none"> <li>• Deerhurst maintenance</li> <li>• Maisemore bridge outfall</li> <li>• Severn Bank Farm to Lords Wall defence</li> <li>• Watersend Farm to Bush Crib defence</li> </ul>
Right	<ul style="list-style-type: none"> <li>•</li> <li>• Cone Pill to Lydney harbour defence</li> <li>• Cowleys Elm outfall</li> <li>• Denny Bridge to Prices Ditch defence</li> <li>• Prices Ditch to Minsterworth Church defence</li> <li>• Minsterworth Church to The Naight defence</li> <li>• The Naight to Highcross defence</li> <li>• Cornham Sluice outfalls</li> <li>• Alney Island defence</li> <li>• Dock Branch Railway and Pool Meadow</li> </ul>

# Annex B WAG Supplementary SMP Guidance for Wales (Oct 2008)

## GUIDANCE FOR THE PREPARATION OF SHORELINE MANAGEMENT PLAN IN WALES

Welsh Assembly Government has agreed that the **Shoreline Management Plan Guidance March 2006** should be used for the preparation of SMPs in Wales.

The development of a risk management approach to address flood and coastal erosion risks in Wales has prompted a review of the 2006 SMP Guidance. This in addition to the Welsh Assembly Government's discussions with the Welsh Coastal Groups Forum (reference meeting 13<sup>th</sup> June 2008) has highlighted areas where the current 2006 Guidance might be tailored to better suit Wales' particular requirements.

The paper is intended to summarise the current position with respect to supplementary SMP Guidance for Wales. Paragraphs 1 and 2 below represent draft supplementary guidance and paragraph 3 indicating areas where further supplementary guidance is being considered. Paragraph 4 describes issues which have been identified by the WCGF but where no change to the 2006 guidance is proposed.

Welsh Assembly Government will continue to engage and monitor SMP preparation and feed in the emerging New Approaches flood and coastal risk policy refresh.

### DRAFT SUPPLEMENTARY SMP GUIDANCE FOR WALES.

#### 1. Risk Management Approach

**The move from a defence dominated to a risk management approach in Wales requires that SMPs provide a framework within which all flood and coastal erosion risk can be documented and communicated to its coastal communities. Having identified the preferred defence management policies the SMP should ascertain the residual risk from events which exceed the defence design standards. Where the residual risk and consequences are significant the SMP should make recommendations on how the risk will be managed. For example in circumstances where the preferred defence policy for a section of coast is 'hold the line' but the consequence of storm event above the defence standard of protection is significant flooding of a coastal community; then the SMP Policy Statement/Action Plan should identify risk management actions such as flood warning, emergency response/evacuation plans, community resilience etc to manage the residual risk.**

*[WAG comment, We would believe this additional guidance should not be too onerous for the SMP preparation with coastal flood risk based on EA data. Recommendations from the SMP will call for actions to develop for example emergency response plans outside the SMP process.]*

**2. Stage 3 Policy Development – WAG's supplementary guidance for appraisal of flood or coastal defence projects issued February 2007 removed the rigid economic rule requiring that to justify public investment a project must attain a quantified benefit cost ratio of at least unity. A copy of the supplementary guidance, which should be integrated into the current Procedural Guidance on socio-economic assessment, is attached.**

*[WAG comment – The additional guidance should not represent any additional work/cost in preparing the SMP.]*

#### 3. Other areas where supplementary guidance is being considered for Wales

- Coastal Flood Risk – It has been identified that there is a gap in the guidance for the preparation of the strategic plans, SMPs and Catchment Flood Management Plans, in that neither plan develops management policies to fully address flood risk from the sea. Current SMP guidance leads to a preferred policy relating to the position of the shoreline. As the strategic plan relating to the coast, SMPs should address sea flooding and additional guidance is likely to be required to determine the preferred policy to manage coastal flooding. This might follow a CFMP approach?

- Clarify the decision making process leading to the selection of the preferred policy – what determines the decision to change a ‘hold the line’ defence policy to a not to defend policy?
- Public Engagement in the decision making process – Need to clarify the public involvement as a stakeholder. Wales Coastal Groups Forum agreed to convene a Sub-group to consider best approach to stimulate public engagement.
- Affordability of SMP policies Wales wide. Need to determine SMP implementation funding requirements for all Wales. If funds not available preferred policies will need to be revisited. Costed policies required for WAG consideration.

*WAG comment – the current Guidance requires that policies are costed for the economic appraisal so this may be opportunity to feed costs to WAG prior to plan completion.*

- Further guidance is needed to include flood risk in SMP Action Plans.

*WAG comment – discussion with EA/Defra have identified that such guidance is being prepared in the light of further SMP2s which have been completed in England. Due for publication in November WAG propose to consider Action Plan guidance for issue in Wales.*

#### **4. Other issues raised by WCGF [reference note of meeting 13<sup>th</sup> June 2008] where supplementary guidance is considered unnecessary.**

- SMP must deliver policies to deliver a long term sustainable shoreline alignment.

*WAG comment - This is a clear objective of the current Guidance and will be achieved by its proper application in the plan preparation. No supplementary guidance is considered necessary.*

- The quality of the coastal resource is an important asset and must be key in the decision process.

*WAG comment – The current Guidance provides for the consideration of all coastal assets and resources. The importance of the coastal resource to Wales can be weighted appropriately relative to other assets in the decision making process. No supplementary guidance is considered necessary.*

- The optimal policy is one which delivers best solution for all issues – defence, tourism, landscape, environment. Current funding arrangements constrain the delivery of holistic projects on the coast.

*WAG comment – the current Guidance aims to identify optimum policies to meet the objectives identified. The constraints on the delivery and funding of multi-objective schemes are acknowledged and the issue will be considered as part of the New Approaches Programme. No supplementary SMP guidance is considered necessary.*

- There should be guidance on the consistency between Plans in terms of comparing each Plan’s issues and priorities.

*WAG comment – the establishment of an Wales SMP Review Group should address this issue. No supplementary guidance is considered necessary.*